

PLEASE AMEND THE CLAIMS AS FOLLOWS:

1. (Currently amended) A method of compressing video data having at least one frame having at least one block and each block having an array of pixels, comprising at least one of the steps of:

I) transforming the pixels of each said at least one block into coefficients, each of said coefficients having a coefficient position, and creating an optimal transmission order of the coefficients of said at least one block, said optimal transmission order comprising a custom scan order;

II) optimizing the speed of processing compressed video data by partitioning the compressed output data bitstream of a given frame into at least two data partitions and coding each partition is coded independently;

III) predicting fractional pixel motion by selecting an one interpolation method from a plurality of interpolation methods for each given plurality of pixels depending upon at least one metric related to each given block said interpolation methods comprising bilinear filtering and bicubic filtering; and or

IV) enhancing error recovery for a current frame using a frame prior to the frame immediately before the current frame as the only reference frame for lessening quality loss during data transmission.

2-48. (Withdrawn)

49. (Original) A method of compressing video data according to Claim 1, wherein the blocks of a given frame are coded as differences from a similarly sized block in a prior coded frame, comprising the following steps:

- a) finding the block that best matches the block to be encoded in a some prior coded frame;
- b) determining the best fractional pixel step away from that best block
- c) calculating a motion vector made from the difference in the row and column between the source block and its best matching block.
- d) Uses an algorithm to determining when to encode:

- + no motion vector at all
 - + the motion vector by reference to a nearby motion vector
 - + the motion vector directly
 - + the motion vector as a difference vector from a nearby motion vector
- e) Transmitting the motion vector or the difference vector

50. (Original) A method as in claim 49 that further comprises the steps of differentially encoding motion vector from the motion vector of the block to the left if that block has a motion vector or the motion vector of the block above if that block has one but the motion vector does not and otherwise encodes the motion vector directly.

51. (Original) A method as in claim 49 that further comprises the steps of differentially encoding from a compound motion vector that is calculated by combining motion vector of the block to the left and the block above through an average or a weighted average.

52. (Original) A method as in claim 49 that codes the row as differential from the motion vector of the block to the left, and the column as differential from the block above.

53. (Original) A method as in claim 51 that only codes the motion vector differentially between the above block or the left block if the motion vectors of the blocks to the left and the blocks above are determined to be similar.